Please amend lines 24-35 on beginning on page 2 to line 1 on page 3, as follows:

a2 The method of producing an anisotropic exchange spring magnet powder of the present invention comprises: preparing a crystalline mother material containing a hard magnetic material phase containing a rare earth metal element, a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O), and/or, the crystalline mother material partially having amorphous parts: amorphising the above-mentioned crystalline mother material, and re-crystallizing the above-mentioned amorphisated mother material.

Please amend lines 6-10 on page 3 as follows:

a3 When the production method of the present invention is effected, an anisotropic exchange spring magnet powder can be obtained which is finer and more excellent in magnetic property by repeating a continuous process composed of an amorphising process and a crystallizing process.

Please amend lines 13-17 on page 5 as follows:

a4 As element components, a rare earth metal element, a transition metal element, and boron (B), carbon (C), nitrogen (N) or oxygen (0) or any mixtures thereof are contained, and a hard magnetic material phase and a soft magnetic material phase have crystal particle diameters of 150 nm or less.

Please amend lines 24-32 on page 7 as follows:

a5 The method of producing an exchange spring magnetic powder of the present invention is a method for obtaining an exchange spring powder as described above, and in this method, a crystalline mother material containing the above-mentioned hard magnetic material phase and soft magnetic material phase, a material obtained by

forming amorphous parts partially in this crystalline mother material, or a mixture of them, is subjected continuously to amorphising treatment and crystallizing treatment each at least once.

Please amend lines 6-10 on page 8 as follows:

In the production method of the present invention, introduction of amorphous parts into such a crystalline mother material can be conducted by known technologies, f or example, a high frequency introduction melting and casting method, liquid quenching method, atomizing method and the like.

Please amend lines 11-17 on page 8 as follows:

A benefit of thus introducing amorphous parts partially into a crystalline mother material previously is that oxidation of the mother material can be suppressed sufficiently since the following amorphising process can be simplified and shortened, and by this means, the magnetic property of the resulting exchange spring magnetic powder can be further improved.

Please amend lines 23-29 on page 8 as follows:

The above-mentioned amorphising process ran be conducted by applying a ball mill method, plasma irradiation method and the like, and by this process, a crystalline mother material and/or a material obtained by introducing amorphous parts into this crystalline mother material is amorphisated into a condition in which fine crystal particles remain in an amorphous matrix.

Please amend lines 30-35 on page 8 through lines 1-4 on page 9 as follows:

In the production method of the present invention, a crystallizing process by heat treatment is conducted following this amorphising process. The heat treatment is applied

to enter the amorphous matrix, which is crystalline mother material to partially introduce the amorphous parts. By this process, crystal particles in the above-mentioned amorphous matrix are crystallized so finely as to cause exchange connection of the particles, and in this procedure, crystals grow continuously toward the direction of fine crystal particles remaining, resultantly, in one crystal particle, an anisotropic exchange spring magnet powder which is fine and has crystal particle diameters of approximately the same size is formed.

Please amend lines 5-13 on page 9 as follows:

In the production method of the present invention, the above-mentioned amorphising process and/or crystallizing process is desirably conducted under a condition in which oxygen is blocked, for example, in vacuum, in an inert gas, in nitrogen or in an organic solvent. By conducting the process under such a condition, deterioration of a rare earth metal-based magnetic compound can be prevented, and decrease in magnetic property of the resulting exchange spring magnetic powder can be prevented.

Please amend lines 14-20, on page 9 as follows:

Further, in the production method of the present invention, it is desirable to repeat the above-mentioned amorphising process and crystallizing process (continuous process of amorphisation-crystallization) once or more times. Namely, after the above-crystallizing process of the first time, a crystallized matrix (crystal) is conducted by the ball mill method. In details, in the second time procedure, the crystallized matrix partly changes into amorphous parts by mechanical energy generated by the ball mill method. By this, the degree of orientation of crystal is further improved, and consequently, an

a11

anisotropy-imparting effect increases, which is effective for improvement of magnetic property.

Please amend lines 21-32 on page 11 as follows:

a12

A crystalline mother material containing amorphous parts was produced according to a liquid quenching method using an alloy of the formula: $Nd_4Fe_{88-x}Co_5Nb_3B_x$, which had been high frequency induction-fused. Then, this crystalline mother material was ground into a coarse powder of 1 mm or less which was amorphised by a plasma irradiation method, then, crystallizing treatment was conducted for given cycles to obtain an anisotropic exchange spring magnet powder of this embodiment. In this magnetic powder, a hard magnetic material phase: $Nd2Fe_{14}B$ had a crystal particle diameter of about 40 nm, and a soft magnetic material phase: Fe_3B had a crystal particle diameter of about 40 nm.

Please amend lines 33-35 on page 11 to line 1, page 12, as follows:

a13

In this plasma irradiation method, the above-mentioned coarse powder was exposed in high frequency Argon (Ar) plasma, and this coarse powder was amorphised from the surface direction by plasma energy.

Please amend lines 25-29 on page 12, as follows:

a14

Fig. 2 shows the relative value of coercive force of the same material as in Fig. 1. It is apparent that coercive force is important as magnetic property can not be obtained in the form of mother material, and is improved by conducting amorphism and crystallization each once or more times.

Please amend lines 14-21 on page 14 as follows:

A crytalline mother material containing amorphous parts was produced according to a liquid quenching method using an alloy of the formula: $Nd_xFe_{84-x}Co_8V_2B_6$ which had been subject to high frequency induction melting and casting, and this mother material

a15

was placed in a stainless steel ball mill pot together with stainless steel balls using cyclohexane as a solvent, and amorphising treatment was conducted according to a ball mill method.

Please amend lines 28-35 on page 14 as follows:

a16

The powder was ground into a powder of 100 μm or less, then, press-molded in a magnetic field of 25kOe (1990kA/m) to produce a compressed powder body, and magnetization curves along magnetic field application direction and vertical direction [to this] of the powder body were measured by a direct current BH tracer manifesting a maximum field of 25kOe (1990kA/m), and presence or absence of anisotropy was confirmed by a difference between these curves.

Please amend lines 8-12 on page 15 as follows:

a17

It is known that the effect of the process of the present invention is extremely high, and anisotropy can be imparted by practicing once. Further, there is also shown a tendency for an increase of anisotropy by repetition of once or more times.

Please amend lines 15-18 on page 15 as follows:

a18

It is apparent that coercive force is important as magnetic property can not be obtained in the form of mother material, and is improved by conducting amorphism and crystallization each once or more times.

Please amend lines 29-32 on page 15 as follows:

The effect of this process is extremely large, and it is known that anisotropy can

919 be imparted by practicing once. Further, there is also shown a tendency of an increase in anisotropy by repetition once or more times.

Please amend line 35 on page 15 through lines 1-3 on page 16 as follows:

920 It is apparent that coercive force is important as magnetic property can not be obtained in the form of mother material, and is improved by conducting amorphism and crystallization each once or more times.

Please amend lines 15-21 on page 16 as follows:

921 Regarding composition range, it is known that higher property above that of conventional magnetic materials is obtained when the atomic % is from 2 to 15. Further, the same effect and high ability could be realized also when Nd-Pr, Pr, Nd-Dy (dysprosium) and the like were used as a rare earth metal element for a rare earth metal element Nd, and these data are illustrated together.

Please amend lines 31-35 on page 16 as follows:

922 It is known that the extent of anisotropy further increases in a magnetic field when sintering is conducted after molding as compared with the case of heat treatment in vacuum as a crystallizing process.

Please amend lines 8-24 on page 17 as follows:

923 As described above, according to the present invention, since a given crystalline mother material is treated in an amorphising process and a crystallizing process, an exchange spring magnet having excellent anisotropy and high maximum energy product can be realized. Namely, the production method of the present invention is a production method providing an anisotropic exchange spring magnet having excellent magnetic